

STEEL AND OUR COUNTRY'S FUTURE

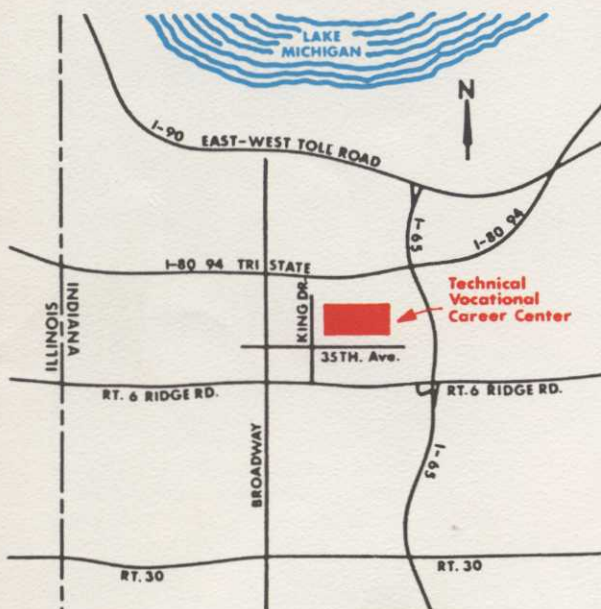
America must have steel, and our country's needs are expected to grow by *30 million tons* in just the next seven years! Will the steel industry be able to meet that mammoth challenge to expand? It depends on some key factors:

Enough money. Money to expand and modernize facilities—purchase tools—and thus provide job opportunities. The bill will be staggering... *\$36 billion*. Finding that much money means that steel producers must have more to reinvest through profits. Sufficient profits must come from steel prices that provide an adequate return, plus government policies that stimulate business investment for expansion.

Wise environmental policies. The steel industry has eliminated or is controlling over 90 percent of its emissions, but it is still working hard and spending billions to improve on that record. But there comes a point when soaring costs for tiny additional improvements far outweigh the advantages. In the end, which picks up the tab? *Consumers*, who pay a portion of pollution control costs in almost everything they buy, and *people who want to work*—but can't—because of unreasonable environmental control requirements that would make it impossible for business to expand.

American citizens. Americans who are concerned about our country's future, and the future of industries like steel, are our best hope. We must look at each problem from every side, so that the decisions we make don't turn out to be short-sighted in the end.

**Tours Start at Gary Career Center,
35th. Avenue & King Drive**



No. 13 blast furnace, Western Hemisphere's largest.



BICENTENNIAL



OPEN HOUSE

JULY 16-25, 1976



The People of Gary Works say, "Welcome!"

The men and women of U. S. Steel's Gary Works are proud to join in America's Bicentennial Celebration by welcoming you to one of the greatest industrial shows on earth.

Gary Works is the largest plant in United States Steel Corporation and holds the world record for steel production — 300 million tons — a milestone that was passed on April 5, 1976. The event came 70 years after ground was broken for the plant and 67 years after the first furnace of glowing steel was tapped in early 1909. With continuing expansion to meet America's ever-growing steel needs, Gary Works people expect to make their next 300 million tons in only 30 years.

Gary Works is observing some other birthdays this year. It is the 75th anniversary of U. S. Steel's founding, and it is the 70th anniversary of the establishment of the city of Gary.

It all began shortly after the turn of the century when one of the founders of U. S. Steel, a former Wheaton, Ill., judge named Elbert Gary, saw tremendous potential for a new steel mill at the sparsely inhabited southern tip of Lake Michigan. The plant would be near a mushrooming Midwestern steel market, where it could receive iron ore and limestone by economical lake transportation, and would have access to plentiful supplies of water needed for steel manufacturing.

Surveyors drove their first stake in early March, 1906, and by July, 337 new residents formed an infant city next to the plant. Thousands more soon joined them to build the mills and stay on to make steel. A hectic pace which took Gary Works from groundbreaking to steel-making in less than three years was a feat rivalled in its day only by the digging of the Panama Canal.

The builders kept constructing coke oven batteries, ironmaking blast furnaces, open hearths, rolling mills, and service facilities. By 1918, Gary Works boasted the longest line of blast furnaces in the world—12 in all. And as production rose, Gary continued to grow, until by 1930 the city counted more than 100,000 residents.

Always, the people of U. S. Steel have been committed to serving customers through the most modern manufacturing methods, as productively as possible. In recent years, changing steel technology has been reflected in giant strides for Gary Works.

During most of Gary Works' history, steel was made in five open hearth shops, using a total of 53 conventional open hearth furnaces and three Bessemer converters. But the never-ending search for more efficient production methods has resulted in all of Gary Works' open hearths departing from the scene in the last 20 years. Today the plant's steel is made in two shops by the more-efficient basic oxygen process (BOP).

No. 2 Q-BOP shop at Gary Works, started in 1973, is the first full-scale application in America of a new process where oxygen to refine the steel is blown through the

bottom of the steelmaking furnace. Q-BOP represents a significant advance over conventional BOP steelmaking developed ten years earlier.

The plant's continuous slab caster, another example of recent technology, has been setting world production records since its startup in 1967. Our newest blast furnace, No. 13, is pictured on the front cover. Started in 1974, it ranks as the largest in the Western Hemisphere and is capable of making as much as 8,000 tons of iron per day.

Two new coking batteries are coming into production this year, one recently completed and another scheduled to begin operations in late fall. Both feature 25-story "pre-carbonization" buildings, which incorporate the latest advances in air quality control technology. Much research and experimentation has been devoted toward finding a solution for a difficult environmental problem.

In all of Gary Works' facilities—new and existing—special emphasis is being given to installing and operating the most effective equipment to safeguard our environment. In the past decade, U. S. Steel has authorized more than \$800 million for environmental control, and \$150 million has been spent since 1962 at Gary. Millions more are being spent now, and will be spent, as new production facilities continue to come onstream.

U. S. Steel employees are looking forward to the promise of the future while sharing pride in their achievement to date. In particular, they are careful in their work, and have compiled a safety record over the years that is ten times better than industry in general. They urge you, in all your activities, to exercise the same care and caution that they apply to their jobs.

SOME QUICK FACTS ABOUT GARY WORKS

Produces coke, coal chemicals, iron, slag, steel ingots, semi-finished steel products, seamless tube rounds, light structural shapes, many varieties of plates, stainless steel bars, special shapes, rails, tie plates, hot rolled bars, bar shapes, concrete reinforcing bars, hot and cold rolled sheets and strip, galvanized and aluminized steel, stainless steel sheets and strip, black plate, electrolytic tin plate, steel foil, steel foundry products.

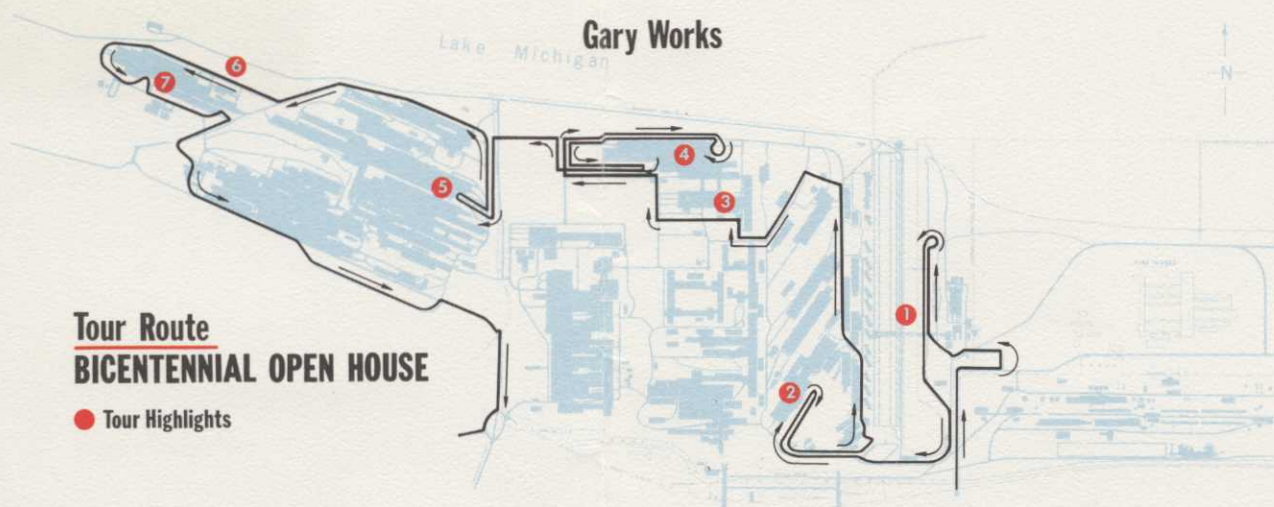
Number of employees — about 21,000, or 12 per cent of all U. S. Steel employees.

Annual Payroll — \$350 million-plus

Average wage and benefit costs for USS employees in steel operations — \$11.27 per hour (December, 1975).

Gary Works acreage — 3,750 acres.

GARY WORKS
UNITED STATES STEEL CORPORATION
1 North Broadway
Gary, Indiana 46402



Tour Route and Highlights



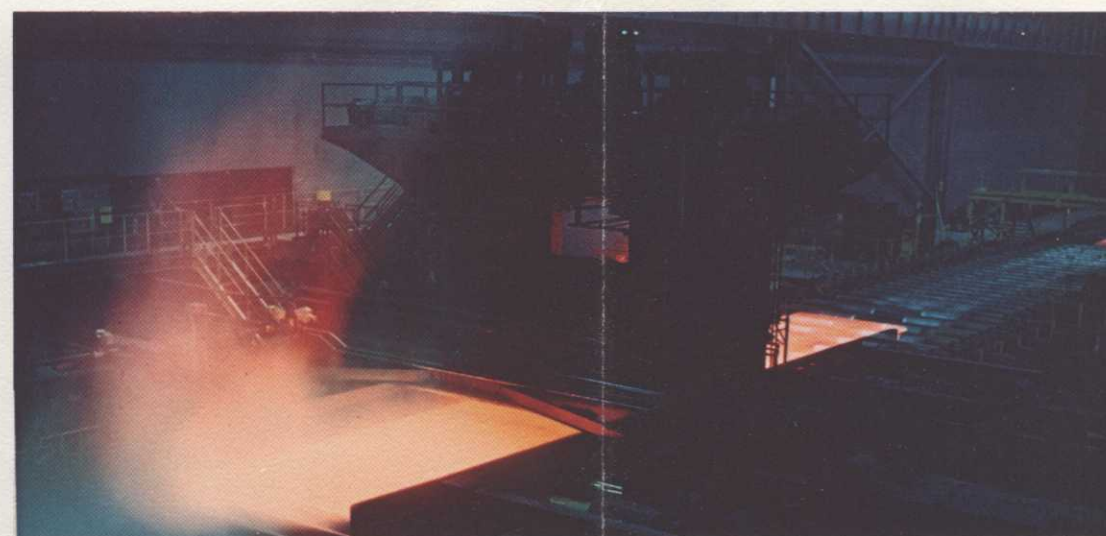
1 Flagship of U.S. Steel's Great Lakes fleet, ROGER BLOUGH, enters port at Gary Works. Vessel measures 858 feet in length and carries up to 50,400 net tons of iron ore pellets from ports on Lake Superior. Various U.S. Steel ore carriers will be docked at Gary and visible from buses during most days of the Bicentennial Open House. (Estimated bus time in dock area—10 minutes.)



2 Glory of steelmaking greets visitors to Gary Works' No. 1 basic oxygen process (BOP) shop. A special observation deck has been constructed overlooking "charging" operations, where molten iron and steel scrap are added to BOP furnace. Furnace is tilted upright and oxygen is blown in to refine more than 200 tons of steel in about 20 minutes. (Walking tour—20 minutes.)



3 Glowing steel ingot is removed from soaking pit, ready to be rolled into slab at 46" slabbing mill. Soaking pits are ovens which serve to equalize temperature of steel throughout ingot before rolling. Ingots enter mill at temperatures in neighborhood of 2,400 degrees F. Then giant rolls squeeze steel into slabs 3½" to 20" thick. (Walking tour—20 minutes.)



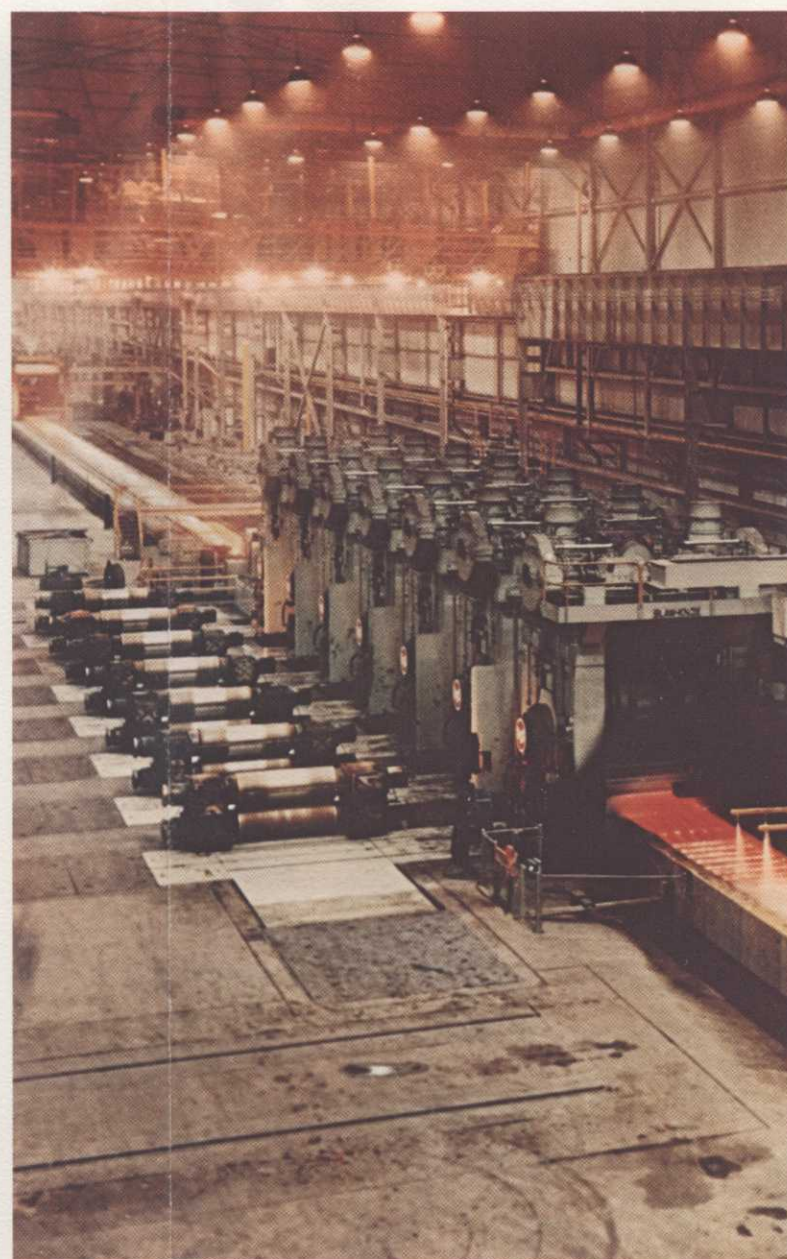
4 Widest steel plate rolling capacity in the world has been claim of Gary Works' 160"/210" plate mill since facility began operations in 1962. Two continuous, four batch-type, and three controlled atmosphere reheating furnaces are available to feed slabs at temperatures of 2,350 degrees F. into plate mill, which can roll products as wide as 200". Principal customers are steel fabricators, heavy equipment makers, and steel warehousing firms. (Walking tour—20 minutes.)



5 Tandem mill in Gary Works' south sheet mill complex is one of many units installed to provide cold rolling and processing of sheet steel products. Among major customers for cold rolled sheets are automobile and appliance industries. On exhibit during Bicentennial Open House will be examples of finished products, plus mobile equipment used in mill. (Tour buses drive through the mill's No. 3 warehouse—10 minutes.)



6 Birds-eye view captures water filtration plant beside 84" hot strip mill, one of many environmental control facilities at Gary Works. Water used at 80" and 84" hot strips is passed through system of scale pits and 12 ultra-high-rate gravity sand filters. Water from plant has fewer suspended solids than water Gary Works takes in from Lake Michigan. (Walking tour—15 minutes.)



7 Flat rolled steel strips in widths up to 75" shoot out of finishing mill stands in Gary Works' 84" hot strip mill at speeds up to 38 miles per hour. Facility was completed in 1967. Slabs weighing up to 74,000 pounds can be fed into mills four reheating furnaces. Extractors gently lower slabs from reheating furnaces onto rolling table, where five roughing mill stands and seven finishing stands spin into action. Water sprays cool the strip after rolling as it speeds along to automatic coiling equipment. Computer assists mill's operators. (Walking tour—25 minutes.)